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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,257	02/06/2006	Tomoo Sugawara	4670-0120PUS1	3057
2292 7590 03/31/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER TESKIN, FRED M				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
03/31/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/567,257

Applicant(s)

SUGAWARA, TOMOO

Examiner

Fred M. Teskin

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5 and 9 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 11, 2008 has been entered.

The Declaration under 37 CFR 1.132 filed on February 12, 2008, and applicant's arguments, see pages 4-7, filed March 11, 2008, with respect to the rejection of claims 1, 2, 4, 5 and 9 under 35 U.S.C. 103 based upon GB '124 alone or in view of Hara, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly discovered prior art to Arai et al.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4059561 (Arai).

Arai is directed to a flame resistant resinous composition comprising (a) a ring-opened polymerization product of a norbornene derivative containing at least one polar group and (b) sufficient amounts of a flame retarding compound (col. 2, ll. 60+). Most relevant to the claimed invention is Sample No. 140 of Table 4 (cols. 51-52), wherein ring-opening polymer (17) is combined with flame retardant (A), together with Arai's description of shaped articles formed from the samples in Table 4 as exhibiting thermal stability and enhanced heat and flame resistant properties (col. 51, ll. 54-57). Polymer (17), as described at column 49, lines 25-30, is a ring-opened copolymer of 5-cyanobicyclo[2.2.1]-heptene-2 (87.4 mole%) and 1,4-dihydro-1,4-methanonaphthalene (12.6 mole%), the latter corresponding to the applicants' monomer as defined in claims 1 and 2. From the reported mole percent values and molecular weights of the monomers, the weight proportion of 1,4-dihydro-1,4-methanonaphthalene is calculated to be 14.7 weight% of the two monomers in the composition, which falls well within the range recited in claim 1 for amount of the corresponding monomer in the claimed composition. Further, as detailed in columns 45-46 (bridging paragraph), polymer (17) was prepared by use of a well-known metathesis polymerization catalyst (WCl_6 /diethylaluminum chloride), using n-hexene-1 as molecular weight regulator (corresponding to applicants' chain transfer agent; *cf.*, claim 4), and in the absence of substantial amounts of solvent (apart from addition of the catalyst components as solutions in 1,2-chloroethane), consistent with bulk polymerizing (*cf.*, claim 9).

Accordingly, Arai is seen to describe a resin product and composition in full compliance with claims 1, 2, 4 and 9.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai.

The discussion of Arai set forth above is incorporated herein by reference.

Sample No. 140 of Arai uses flame retardant (A), which is halogenated as per column 33, lines 35-36. However, Arai teaches that a metal-containing inorganic compound such as antimony trioxide or zinc borate may be added to the base composition in order to further improve flame resistance of such compositions. See column 28, lines 25-42 and Table 2 in columns 37-38, wherein specific species of such compound are used to provide compositions exhibiting a non-combustible (N) rating in the indicated burning test. Motivated by the expectation of further improving flame resistance, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Sample No. 140 of Arai by including a metal-containing inorganic compound as taught therein, resulting in a composition comprising a halogen-free flame-retardant as per claim 5.

The Declaration under 37 CFR 1.132 filed February 12, 2008 is insufficient to overcome the new grounds of rejection based upon Arai as set forth above because: (1) as to claims 1, 2, 4 and 9, the asserted evidence of unobvious results is not relevant to the anticipation rejection, *In re Malagari*, 182 USPQ 549, 553 (CCPA 1974), and (2) as to claim 5, the experimentation presented in the Declaration is not directed to

establishing any unexpected result or surprising property flowing from the inclusion of a non-halogenated flame retardant in the applicants' claimed composition.

Claims 7 and 8 are objected to as being dependent on a rejected base claim but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim. Inclusion in the claimed composition of an aromatic condensed ring-containing cycloolefin monomer having three unsaturated aliphatic rings (claim 7) or tetracyclo[9.2.1.0^{2,10}.0^{3,8}]tetradeca-3,5,7,12-tetraene (claim 8) is not taught nor fairly suggested in the available prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fred M Teskin/

Primary Examiner, Art Unit 1796

